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June 30, 2021

Paul Proto (proto.paul@epa.gov)
Region 5
United States Environmental Protection Agency
77 West Jackson Boulevard
Chicago, IL 60604

RE: Comments on EPA's April 27, 2021 Decision Document Regarding the Sulfate Impaired Waters EPA is Adding to the Minnesota's 2020 CWA Section 303(d) List.

Dear Mr. Proto

These comments are submitted on behalf of WaterLegacy and Northeastern Minnesotans for Wilderness ("NMW"). We and the thousands of Minnesotans we represent support the oversight exercised by the U.S. Environmental Protection Agency ("EPA") under the Clean Water Act ("CWA") to partially disapprove Minnesota's 2020 CWA Section 303(d) impaired waters list on March 26, 2021 and to propose listing of an initial 30 Water Quality Limited Segments ("WQLS") as impaired due to sulfate affecting their beneficial use for wild rice.

EPA's action was not only welcome, but obligatory under the CWA. For decades, the Minnesota Pollution Control Agency ("MPCA") has violated the CWA by failing to list wild rice waters impaired due to sulfate in excess of Minnesota's federally approved water quality standard of 10 milligrams per liter ("mg/L").

WaterLegacy has requested EPA intervention to list wild rice sulfate impaired waters since 2014. On October 22, 2020, WaterLegacy wrote to EPA Region 5 Regional Administrator Kurt Thiede and Water Division Director Tera Fong requesting that EPA assume oversight of Minnesota's Section 303(d) process and list wild rice waters impaired due to sulfate. With that letter, we provided exhibits reflecting MPCA's failure to list wild rice waters. We received no response.

On March 12, 2021, WaterLegacy wrote to EPA Region 5 Acting Regional Administrator Cheryl Newton and Director Fong, copying David Pfeifer and Paul Proto, requesting that EPA exercise its authority under the CWA, partially disapprove Minnesota's 2020 impaired waters list due to failure to list wild rice waters impaired by sulfate, and list sulfate impaired waters. Both this March 12, 2021 letter and attachments and the documents enclosed with an email to Barbara Wester on April 14, 2021 have been submitted as part of WaterLegacy's comments in this administrative record. We rely on these prior records and incorporate them by reference.

NMW is committed to the protection of the Boundary Waters Canoe Area Wilderness, which requires the protection of its watersheds in northeastern Minnesota. NMW conducts water quality monitoring in Birch Lake and submits with these comments a report of its protocols and 2020-2021 sulfate data.

These comments by WaterLegacy and NMW seek to reinforce the EPA's actions to date in partially disapproving Minnesota's 2020 CWA Section 303(d) list and listing an initial 30 wild rice waters as sulfate impaired WQLS. These comments also seek the additional listing of 20 additional wild rice WQLS impaired due to sulfate, as summarized in the Exhibit A spreadsheet.

The discussion below supports EPA's non-discretionary duty under the CWA to disapprove Minnesota's failure to list wild rice WQLS impaired due to sulfate in Minnesota's 2020 Section 303(d) list. The CWA also requires that EPA's listing of sulfate impaired wild rice waters be an independent decision based on all readily available data. The discussion provides additional support for two of the specific WQLS proposed by EPA and then explains the grounds for listing the additional 20 wild rice sulfate impaired waters summarized in Exhibit A.

DISCUSSION

1. EPA had a non-discretionary duty to partially disapprove Minnesota's 2020 CWA Section 303(d) list and list wild rice WQLS impaired due to sulfate.

The CWA requires that states identify all waterbodies within their boundaries that do not meet or are not expected to meet water quality standards. 33 U.S.C. § 1313(d)(1)(A); 40 C.F.R. § 130.7(b)(1). EPA is then required to either approve or disapprove the state's impaired waters listings not later than 30 days after the date of submission. 33 U.S.C. § 1313(d)(2); 40 C.F.R. § 130.7(d)(2). EPA is authorized to approve a state impaired waters list "only if it meets the requirements" of the CWA. 40 C.F.R. § 130.7(d)(2). If the EPA disapproves the state's listing of impaired waters, the EPA has another 30 days after the date of disapproval to identify impaired waters in the State. *Id.*

MPCA's 2020 CWA Section 303(d) list failed to list any wild rice WQLS impaired due to sulfate. MPCA has a valid water quality standard limiting sulfate to 10 mg/L in waters used for the production of wild rice ("wild rice waters"), Minn. R. 7050.0224, subp. 2, and there are many Minnesota wild rice waters where the state water quality standard is exceeded.

Under the CWA, Minnesota's numeric sulfate standard applies when the use of waters for wild rice is an existing use since November 28, 1975. 40 C.F.R. § 131.3(e) ("Existing uses are those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards."). The Minnesota Court of Appeals has determined that Minnesota's wild rice sulfate rule must be applied under the CWA, even if the Legislature may limit its effect on state-only programs, stating "The wild rice rule is a water-quality standard that is subject to enforcement under the CWA, including through the NPDES permitting program." *In re Reissuance of an NPDES/SDS Permit to U.S. Steel Corp.*, 937 N.W.2d 770, 788 (Minn. App. 2019).

States cannot "shirk their responsibility" for listing impaired waters "simply by claiming a lack of current data." *Sierra Club, Inc. v. Leavitt*, 488 F.3d 904, 913 (11th Cir. 2019). When the EPA disapproves a state's impaired waters list, the EPA has a non-discretionary duty to issue its own list. *Id.* at 908; 33 U.S.C. § 1313(d)(2); 40 C.F.R. § 130.7(d)(2).

2. EPA's listing of Minnesota wild rice WQLS impaired for sulfate is an independent decision under the CWA based on beneficial use and all readily available data.

Once the EPA has disapproved a state's Section 303(d) list for failure to list WQLS, the EPA has an independent responsibility to "identify such waters in such State and establish such loads for such waters *as he determines necessary* to implement the water quality standards applicable to such waters." 33 U.S.C. § 1313(d)(2) (emphasis added); 40 C.F.R. § 130.7(d)(2) ("identify such waters in such state. . . as determined necessary to implement applicable WQS"). EPA's duty is neither based on MPCA's process, timing, or methodology. A reviewing court will evaluate EPA's decision, not the methodology used by the state. *Sierra Club v. Leavitt*, 488 F.3d at 913.

As detailed in Attachments A through C to WaterLegacy's March 12, 2021 letter to EPA, MPCA's process for limiting wild rice waters based on acreage and density, is inconsistent with the CWA and would exclude hundreds if not thousands of Minnesota waters for which wild rice is or has been an existing beneficial use at any time since November 28, 1975. The Administrative Law Judge and Chief Administrative Law Judge who reviewed MPCA's proposed rulemaking both found that MPCA's proposed list of approximately 1,300 wild rice waters was impermissibly underinclusive under CWA regulations. EPA's independent determination of sulfate impaired waters cannot exclude wild rice waters due to "insufficient information" on acreage or density, as MPCA proposed to do.

EPA must use all data that must be considered under the CWA, whether or not a state has used that data. In *Thomas v. Jackson*, 581 F.3d 658 (8th Cir. 2009), the court upheld EPA's decision to review Iowa's impaired waters list "in accordance with existing federal regulations" rather than in compliance with a statute enacted by the Iowa legislature to limit "credible data" to that within the past five years. *See also Sierra Club, Inc. v. Leavitt*, 488 F.3d at 914 (for EPA to adopt Florida's 7.5-year data cutoff "contradicts the CWA's statutory and regulatory language such that it is not entitled to deference").

CWA regulations for listing impaired waters require that a state (or the EPA when listing waters necessary to implement water quality standards) "assemble and evaluate all existing and readily available water quality-related data and information." 40 C.F.R. § 130.7(b)(5). This data shall, specifically, include information about waters "for which water quality problems have been reported by local, state, or federal agencies; members of the public; or academic institutions." *Id.* at (iii). In fact, "[t]hese organizations and groups should be actively solicited for research they may be conducting or reporting." *Id.*

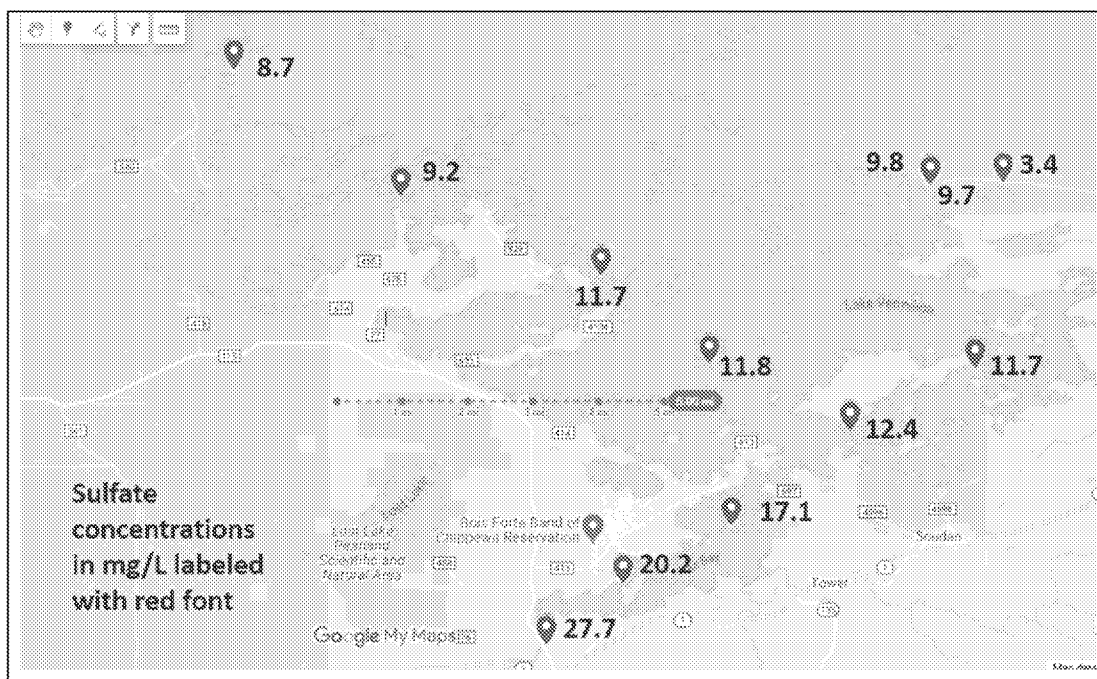
EPA's Decision Document Regarding the Sulfate Impaired Waters EPA is Adding to the Minnesota's 2020 CWA Section 303(d) List ("EPA DD") correctly considered data outside MPCA's cutoff period (2008-2018). *See* EPA DD at 12-13. This consideration is particularly necessary when the readily available water quality data is more recent than MPCA's 2018 cutoff. Finally, under CWA regulations, it is incumbent on an agency listing impaired waters not only to assemble and evaluate, but to solicit research that members of the public, academic institutions, and other local, state, or federal agencies have conducted. These comments rely on timely research and data provided by all of these sources.

3. EPA's initial listing of 30 wild rice WQLS impaired for sulfate is a reasonable and good faith list, for which the undersigned organizations offer additional support.

WaterLegacy and NMW support listing of the 30 wild rice WQLS EPA proposed to add to Minnesota's Section 303(d) list as sulfate impaired waters on April 27, 2021. Additional support is provided for the listing of specified waters below.

Vermillion Lake – Pike Bay (AUID 69-0378-03)

EPA proposed to list Vermillion Lake – Pike Bay as a sulfate impaired wild rice water. The attached 1854 Treaty Authority survey map¹ confirms wild rice in Pike Bay. Additional sulfate data confirms that Pike Bay is a sulfate impaired water. Citizen scientists organized as the Northern Lakes Technical Scientific Advisory Panel ("NLSAP") completed recent additional sulfate sampling in Vermillion Lake. Their June 2021 report,² found sulfate concentrations in Pike Bay of 20.2 mg/L and 17.1 mg/L, with an even higher concentration of sulfate, 27.7 mg/L, in the Pike River flowing to Pike Bay. Figure 2 (below) from NLSAP's report confirms that Vermillion Lake – Pike Bay must be listed as a wild rice WQLS due to excessive sulfate.



Embarrass River (AUID 04010201-A99)

EPA proposed to list Embarrass River segments AUID 04010201-579 (upstream of Embarrass Lake), A99 (Embarrass Lake to Esquagama Lake) and B00 (downstream of Esquagama) as sulfate impaired wild rice waters. MPCA's final list of sulfate impaired waters identified -579 and -A99 as wild rice waters. EPA DD, Appx. 1. EPA concluded that segment -A99 has excessive sulfate based on sampling in the upstream (-579) and downstream (B00) Embarrass River segments, as well as segment -A99. Additional support for EPA's listing of -A99 as sulfate impaired is provided

¹ 1854 Treaty Authority, Lake Vermillion Map showing wild rice (blue dots), Exhibit B.

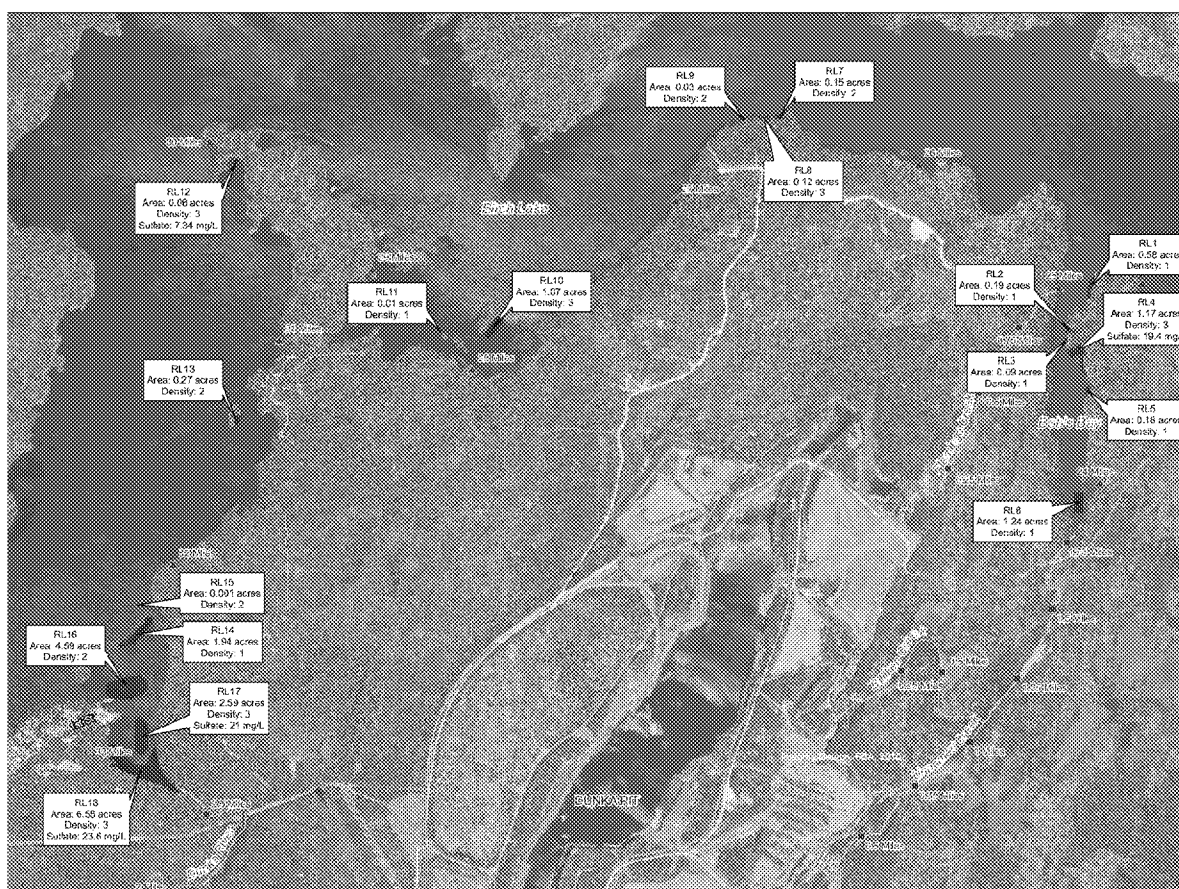
² NLSAP, Lake Vermillion Minnesota, Water Quality Technical Report (June 2021), Exhibit C.

by MPCA's Sulfate Data Summary for the immediately upstream Embarrass Lake (69-0496-00),³ and MPCA data for the proximate downstream Esquagama Lake (65-0002-00).⁴ Sulfate in both lakes exceeds 10 mg/L and confirms that -A99 must be listed as a sulfate impaired WQLS.

4. EPA must list additional wild rice WQLS based on the existing use of waters for wild rice and readily available data that sulfate exceeds Minnesota's 10 mg/L standard.

Birch Lake (St. Louis County) (AUID 69-0003-00) (Bob Bay -301, Dunka Bay -303, S009-182, areas north of Dunka Bay -202, -203, and -503)

EPA must list several segments of Birch Lake as wild rice WQLS impaired by sulfate. MPCA proposed to list Birch Lake as a wild rice water⁵ and confirmed this designation in a March 15, 2021 letter to EPA. Field surveys conducted for Cliffs Erie in 2011 identified wild rice in Dunka Bay, Bob Bay, and numerous sites between.⁶



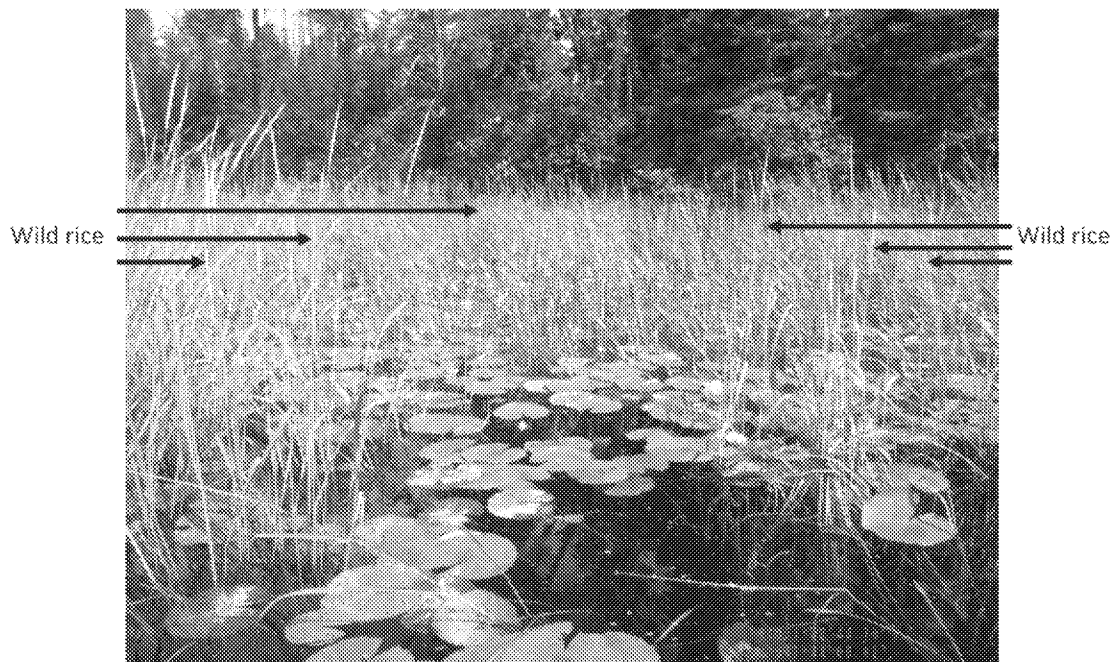
³ MPCA Sulfate Data Summaries All WIDs (Apr. 9, 2021) in Appx. 4 to EPA DD.

⁴ MPCA Data is surface water data online at <https://webapp.pca.state.mn.us/surface-water/search>. Data - Esquagama Lake was provided in Attach. C to WaterLegacy letter to EPA on Apr. 14, 2021

⁵ EPA DD, Appx. 1.

⁶ Barr, Wild Rice Literature Review and 2011 Field Survey for the Dunka Mining Area, Figure 3, (Dec. 20, 2011), Exhibit D. *See also* Twin Metals. Scoping Environmental Assessment Worksheet, Wild Rice in Birch Lake Figure 8-7 (Dec. 18, 2019), Exhibit E.

The Barr report also included photographs showing wild rice in both Bob Bay and Dunka Bay of Birch Lake.⁷



Birch Lake, Bob's Bay, 8/15/2011, wild rice and lily pads. Emergent vegetation is predominantly wild rice. Photo taken at reference location RL4.



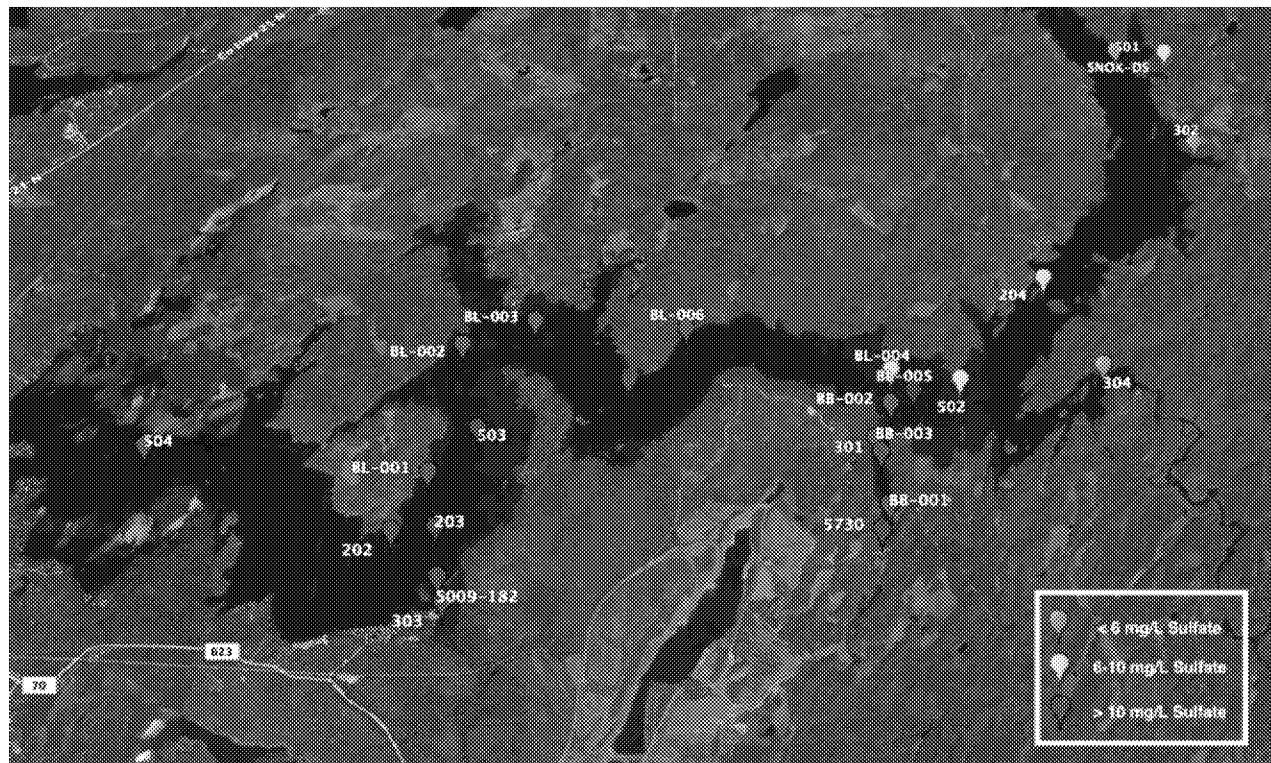
Birch Lake, 8/17/2011, wild rice near Dunka River outlet, facing east. Vegetation in photograph is predominantly wild rice. Photo taken at reference location RL18.

⁷ *Id.* at D-1, D-2.

MPCA sulfate data on Birch Lake is sparse and outdated, but MPCA's single sulfate sample from Bob Bay (AUID 69-0003-00-301) in 2019 was 19.9 mg/L.⁸ Data from the 1854 Treaty Authority and from NMW's and NLSAP's independent monitoring demonstrates that both Bob Bay and Dunka Bay are impaired waters. NMW field research also shows that a significant segment of Birch Lake has sulfate concentrations in excess of 10 mg/L apparently due to Dunka River sulfate.

Data from the 1854 Treaty Authority show that Dunka Bay (-303)) exceeded 10 mg/L sulfate in both 2013 (13.1 mg/L) and 2021 (21.0 mg/L). Bob Bay (-301) had a 53 mg/L sulfate concentration in 2021, and sulfate from Unnamed Creek flowing to Bob Bay was 194 mg/L.⁹

NMW's Birch Lake water quality sampling protocols and results are detailed in a report, 2020-2021 Sulfate Sampling Effort for Birch Lake (69-0003-00), June 28, 2021, Exhibit G ("NMW Report"). NMW data is summarized in the Exhibit H spreadsheet. The NMW Report includes the results of a total of 104 samples taken in Birch Lake, most during May and June, 2021. NMW Report at 8-20. NMW sampling locations in the segments near Bob Bay and Dunka Bay are shown below. NMW Report at 20.



In Bob Bay (AUID -301 and proximate NMW sites BB-001, -002, -003), NMW reported 17 sulfate samples, 100% of which exceeded 10 mg/L; average sulfate was 29.58 mg/L. Exhibit H. NMW reported 6 sulfate samples in Dunka Bay (AUID -303 and S009-182), 100% of which exceeded 10 mg/L; average sulfate was 15.35. *Id.* North of Dunka Bay itself (AUID -202, -203, -503 and BL-

⁸ MPCA Data provided in Apr. 14, 2021, Attach. C, *supra*.

⁹ 1854 Authority Birch Lake Data, Exhibit F.

001, -002, -003) sulfate impairment persisted. NMW took 43 sulfate samples, all of which fell between 10.5 and 12.40 mg/L, with an average of 11.44 mg/L. *Id.*

NLSAP sampled Birch Lake in 2021, taking three sulfate samples in Bob Bay, 100% of which exceeded 10 mg/L, with an average of 25.23 mg/L.¹⁰ Three sulfate samples taken by NLSAP in Dunka Bay all exceeded 10 mg/L, with an average of 12.1. *Id.* Adjacent areas of Birch Lake also exceeded 10 mg/L, and the Dunka River where it enters Dunka Bay had sulfate of 19.9 mg/L.

MPCA's single recent Bob Bay sample as well as extensive data from the 1854 Treaty Authority, NMW, and NLSAP support listing Birch Lake as a sulfate impaired WQLS. Although MPCA documents few recent sulfate exceedances in Birch Lake,¹¹ MPCA data in the Exhibit J folder shows that sulfate upstream in the Dunka River (S002-765), which flows to Dunka Bay, has exceeded 10 mg/L both historically (37.82 mg/L) and recently (24.93 mg/L).

EPA must list Birch Lake – Bob Bay (69-0003-00-301) and Birch Lake – Dunka Bay (69-0003-00-303) as wild rice WQLS impaired due to sulfate. The weight of the evidence further suggests that anthropogenic sulfate from the Dunka River has resulted in sulfate impairments in Birch Lake north of Dunka Bay (69-0003-00-202, -203, -503 and beyond), suggesting broad segments of Birch Lake should also be listed as wild rice sulfate impaired WQLS.

St. Louis River Estuary (St. Louis County) (AUID 0410201-532 and 0410201-533 also identified as AUID 69-1291-04 and 69-1291-03)

MPCA online GIS mapping of Minnesota AUIDs, sampling locations and sites where MPCA has identified wild rice¹² confirms wild rice in both AUID 0410201-532 and -533 in the Upper Estuary of the St. Louis River. MPCA identified these Estuary AUIDs as draft wild rice impaired waters in 2013.¹³

Locating data for sulfate levels in the St. Louis River Upper Estuary is complicated by MPCA's changeover from river AUID designations 0410201-532 and -533 to, respectively, lake AUID designations 69-1291-04 and 69-1291-03. MPCA's surface water data site lacks cross-references to locate sampling data, and some sites have few samples. However, sulfate data showing that AUID's -532 (69-1291-04) and -533 (69-1291-03) are impaired for excessive sulfate was provided by MPCA counsel for stations S007-206, -444, -507, -510, -512, -515, and -516.¹⁴ This data shows that for the 69-1291-04 Upper Estuary area, MPCA identified nine sulfate samples, five of which exceeded 10 mg/L, with average sulfate of 12.39 mg/L. For the 69-1291-03 area, MPCA identified one sample in Spirit Lake with a sulfate concentration of 20.8 mg/L. *Id.*

Reviewing MPCA online GIS maps, two other sampling locations are within these Upper Estuary AUIDs. S000-021 is within -532 and S000-277 is within -533. Exhibit K at 2, 4. Data for the St.

¹⁰ NLSAP, Birch Lake Minnesota, Water Quality Technical Report at 4 (June 2021), Exhibit I.

¹¹ See Data – Birch Lake (Revised) in Exhibit J, Folder of MPCA Surface Water Data

¹² MPCA online ArcGIS mapping with AUIDs, sampling sites, and wild rice sites is found at <https://www.arcgis.com/home/webmap/viewer.html?useExisting=1>. Screenshots for proposed Upper Estuary wild rice sulfate impaired WQLS are provided in Exhibit K at 2-4

¹³ MPCA 2013 Draft Impaired Waters is included in Appx. 4 to EPA DD.

¹⁴ MPCA Email, Sulfate Data in St. Louis River Estuary (May27, 2021), Exhibit L. See also Data St. Louis Upper Estuary (MPCA Email) in Exhibit J folder.

Louis River Estuary S000-021 and S000-277 are provided in the Exhibit J folder. For S000-021, historic MPCA data shows an exceedance of the 10 mg/L sulfate standard. There are 43 recent samples, of which 36 or 84% exceed 10 mg/L, with an average of 15.04 mg/L. For S000-277, historic MPCA data also shows an exceedance of the 10 mg/L sulfate standard. There are seven recent samples, 100% of which exceed 10 mg/L, with an average 18.01 mg/L.

Based on all readily available data, both St. Louis River Estuary AUID locations 0410201-532 (69-1291-04) and 0410201-533 (69-1291-03) must be listed as wild rice WQLS due to sulfate impairment.

Additional Lakes and Lake Segments.

Additional lakes and lake segments must be listed as wild rice WQLS impaired due to sulfate. Lake segments proposed for addition to Minnesota's Section 303(d) list as sulfate impaired WQLS are listed below in alphabetical order and summarized in Exhibit A.

Bear Lake (Freeborn County) (AUID 24-0028-00)

Bear Lake is listed as a wild rice water in the Minnesota Department of Natural Resources ("DNR") 2008 report to the Minnesota Legislature.¹⁵ MPCA GIS mapping confirms wild rice. Exhibit K at 5. MPCA Sulfate Data Summaries, Appx. 4 to EPA DD, show 10 sulfate samples, with 90% above 10 mg/L, a mean of 25.27 mg/L, and a lower 95% confidence interval of 17.93 mg/L. Bear Lake must be listed as a wild rice WQLS impaired due to sulfate.

Dark Lake (St. Louis County) (AUID 69-0790-00)

The presence of wild rice in Dark Lake is confirmed in the field research done by the University of Minnesota ("U of M") for MPCA, led by Amy Myrbo, PhD.¹⁶ MPCA data for Dark Lake in the Exhibit J folder includes 12 sulfate samples, 100% of which are above 10 mg/L with average sulfate of 144.6 mg/L. The four samples in U of M data all exceed 10 mg/L and average 174.75 mg/L. Dark Lake must be listed as a wild rice WQLS impaired due to sulfate.

Mississippi Pool 4/Robinson Lake (Wabasha County) (AUID 79-0005-02)

The presence of wild rice is confirmed by U of M field study data, Exhibit N, and by MPCA online GIS mapping, Exhibit K at 6. MPCA data for Miss. R. Robinson Lake has four samples, three of which exceed 10 mg/L, with an average of 23.5 mg/L. Exhibit J folder. The samples taken in U of M field research all exceed 10 mg/L, with an average of 29.57 mg/L. Exhibit N. Although it would be desirable to have additional samples, Mississippi Pool 4/Robinson Lake should be listed as a wild rice WQLS impaired due to sulfate.

Pearl Lake (Stearns County) (AUID 73-0037-00)

Pearl Lake was identified as a wild rice water in MPCA's 2013 Draft Impaired Waters, Appx. 4, EPA DD, and through DNR interagency data collaboration in the wild rice sulfate rulemaking process, as reflected in MPCA's Wild Rice Waters database.¹⁷ MPCA Sulfate Data Summaries (Appx. 4, EPA DD) identify 45 sulfate samples, 100% of which exceed 10 mg/L, with mean sulfate

¹⁵ DNR, Natural Wild Rice in Minnesota, Report to Minn. Legislature (Feb. 15, 2008), Exhibit M at 67.

¹⁶ Univ. of Minn., Field Survey Data (Feb. 6, 2015), excerpted for sulfate data and highlighted, Exhibit N.

¹⁷ MPCA Wild Rice Waters database (July 19, 2016) provided to Wild Rice Sulfate Standard Advisory Committee on Jan. 25, 2017 is included as Attach. A in Appx. 4 to EPA DD, see row 2193 for Pearl Lake.

of 24.88 mg/L and a lower 95% confidence interval of 22.79 mg/L. Pearl Lake must be listed as a wild rice WQLS impaired due to sulfate.

Rice Lake (Stearns County) (AUID 73-0196-00)

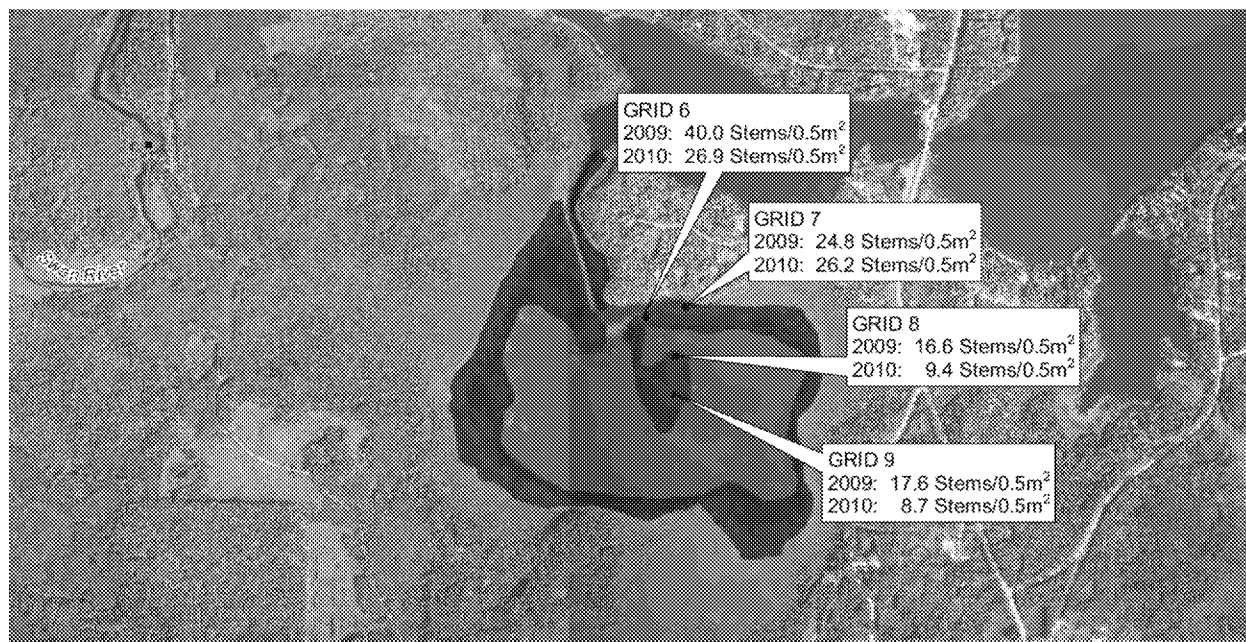
Rice Lake was identified as a wild rice water in DNR's 2008 legislative study, Exhibit M at 82. Wild rice is confirmed by MPCA online GIS mapping, Exhibit K at 7. MPCA Sulfate Data Summaries (Appx. 4, EPA DD) identify 13 sulfate samples, 11 of which or 84.6% exceed 10 mg/L, with a mean of 29.13 mg/L and a lower 95% confidence interval of 23.01 mg/L. Rice Lake must be listed as a wild rice WQLS impaired due to sulfate.

Sturgeon Lake (Goodhue County) (AUID 25-0017-01)

Sturgeon Lake was identified as a wild rice water in MPCA's final list of approximately 1,300 wild rice waters, Appx. 1, EPA DD. MPCA Sulfate Data Summaries (Appx. 4, EPA DD) identify 58 sulfate samples, 100% of which exceed 10 mg/L, with a mean of 52.55 mg/L and a lower 95% confidence interval of 48.06 mg/L. Sturgeon Lake must be listed as a wild rice WQLS impaired due to sulfate.

Swan Lake (Itasca County) (West Bay AUID 31-0067-01 and Main Basin 31-0067-00, -02)

The EPA listed the Southwest Bay of Swan Lake (AUID 31-0067-03) as a proposed wild rice sulfate impaired WQLS. Current MPCA GIS mapping identifies the Swan Lake West Bay (not just the southern part of the West Bay) as AUID 31-0067-01. *See* Exhibit K at 8. The Keetac expansion environmental impact statement ("EIS") also both the southern and northern areas as the Swan Lake West Bay.¹⁸ The 2011 Barr Engineering Report for U.S. Steel Keetac shows wild rice in the West Bay in the southern area extending to the neck of northern part of the bay.¹⁹



¹⁸ DNR, Keetac Mine Expansion Project, Final EIS, Vol. II, (Nov. 2010) Figure 4.9.7.1 Exhibit O. This "Keetac Final EIS" is at <https://www.dnr.state.mn.us/input/environmentalreview/keetac/index.html>.

¹⁹ Barr Engineering, 2010 Water Quality, Hydrology, and Wild Rice Monitoring Year End Report for U.S. Steel Corp. Keetac Expansion Project, Figure 11 (Jan. 2011), Exhibit P.

MPCA data for “Swan West Bay” AUID 31-0067-01 is more recent and robust than data for -03, “Swan Southwest Bay.” See Data Swan - Lake in Exhibit J folder. For -01, MPCA data shows 27 sulfate samples, of which 21 or 78% exceed 10 mg/L, with average sulfate of 22.34 mg/L. Swan Lake West Bay (AUID 31-0067-01) must be listed as a wild rice WQLS impaired due to sulfate.

DNR’s 2008 wild rice report identified the main basin of Swan Lake (AUID 31-0067-00) as a wild rice water with 50 acres of wild rice. Exhibit M at 72. As the MPCA online surface water data and GIS maps show, the Swan Lake Main Basin has previously been identified both as 31-0067-00 and -02, and there is wild rice in the Main Basin. Exhibit K at 8.

MPCA’s online surface water Data- Swan Lake, in the Exhibit J folder, contains no data for -00, but comprehensive and recent data for -02, suggesting that this is the AUID now used for the Swan Lake Main Basin. MPCA data for -02 shows 81 sulfate samples, of which 100% exceed 10 mg/L, with and average sulfate level of 27 mg/L. Swan Lake Main Basin (AUID 31-0067-00, -02) must be listed as a wild rice WQLS impaired due to sulfate.

Additional River and Stream Segments

Rivers and streams proposed for addition as wild rice WQLS impaired due to sulfate are listed below in alphabetical order and summarized with applicable data in Exhibit A.

Bostick Creek (Lake of the Woods County) (AUID 09030009-537)

Bostick Creek was identified as a wild rice water in DNR’s 2008 legislative study, Exhibit M at 75. Wild rice is confirmed by MPCA online GIS mapping, Exhibit K at 9, and MPCA proposed Bostick Creek in its 2013 Draft Impaired Waters List, Appx. 4 to EPA’s DD. MPCA Sulfate Data Summaries (Appx. 4, EPA DD) identify 10 sulfate samples, 100% of which exceed 10 mg/L, with a mean of 32.77 mg/L and a lower 95% confidence interval of 30.29 mg/L. Bostick Creek must be listed as a wild rice WQLS impaired due to sulfate.

Cannon River (Goodhue County) (AUID 07040002-501 or -551)

Cannon River was identified as a wild rice water in DNR’s 2008 legislative study, Exhibit M at 67, and several segments of the Cannon River were listed in MPCA’s 2013 Draft Impaired Waters list, with the explanation that the DNR’s listing did not identify where on the river wild rice was present, although “[w]herever sampled, the Cannon River has high sulfate concentrations.” MPCA 2013 Draft Impaired Waters at 1, Appx. 4, EPA DD. For these comments, each of the segments identified by MPCA were evaluated.

One of the Cannon River segments identified by MPCA as a draft impaired water in 2013 is -501. As shown in MPCA online GIS mapping, Exhibit K at 10, segment 501 does not appear to contain wild rice, but its immediate downstream river segment -551 is a confirmed wild rice location. There is no sulfate sampling available in -551, but MPCA’s Sulfate Data Summaries (Appx. 4, EPA DD) for the proximate upstream -501 Cannon River segment identify 10 sulfate samples, 100% of which exceed 10 mg/L, with a mean of 24.56 mg/L and a lower 95% confidence interval of 22.01 mg/L. The Cannon River must be listed as a wild rice WQLS impaired due to sulfate. Listing of either segment -501 or segment -551 would allow calculation of a total maximum daily load for sulfate to protect wild rice in segment -551, just before the Cannon River junction with the Mississippi River.

Chippewa River (Chippewa County) (AUID 07020005-501)

Several segments of the Chippewa River, including segment -501, were listed in MPCA's 2013 Draft Impaired Waters list with the explanation that DNR's study point is not clear where on the Chippewa River wild rice is present and that "[w]herever sampled the Chippewa River has high sulfate concentrations." MPCA 2013 Draft Impaired Waters at 1, Appx. 4, EPA DD. For these comments, each of the segments identified by MPCA in 2013 were evaluated. The presence of wild rice was confirmed in segment -501, as shown in Exhibit K at 11.

MPCA data for Chippewa River segment -501, Exhibit J folder, shows historic elevated sulfate. MPCA data also includes nine recent sulfate samples 100% of which exceed 10 mg/L, with an average sulfate concentration of 139.4 mg/L. The Chippewa River segment -501, just before the Minnesota River junction, must be listed as a wild rice WQLS impaired due to sulfate

Hay Creek (Itasca County) (AUID 07010103-545)

Tribes have identified Hay Creek as a wild rice water. The presence of wild rice in Hay Creek is clearly demonstrated in Figure 4.7.4 of the Keetac Final EIS.²⁰ Wild rice is also confirmed in Hay Creek by MPCA online GIS mapping, Exhibit K at 12. MPCA Sulfate Data Summaries (Appx. 4, EPA DD) identify 11 sulfate samples, 100% of which exceed 10 mg/L, with a mean of 24.99 mg/L and a lower 95% confidence interval of 22.02 mg/L. Hay Creek must be listed as a wild rice WQLS impaired due to sulfate.

Mississippi River Root R. to Iowa, including Pool 8 (Houston County) (AUID 07060001-509) (Stations S007-222, S007-556)

University of Minnesota field research, Exhibit N, demonstrates that AUID 07060001-509, described as Mississippi River Pool 8, is a wild rice water at Genoa and Reno (S007-222, S007-556). The presence of wild rice is also confirmed by MPCA online GIS mapping at several locations just south of the Root River confluence with the Mississippi River segment, as well as further south near Genoa and Reno. Exhibit K at 13. MPCA data for segment -509 in the Exhibit J folder has nine sulfate samples, six or 66% of which are above 10 mg/L, with average sulfate of 18.44 mg/L, excluding no outliers. The five samples in U of M data, Exhibit N, all exceed 10 mg/L, with average sulfate of 28.58 mg/L. Mississippi River segment 07060001-509 must be listed as a wild rice WQLS impaired due to sulfate

Raven Stream West Branch (Scott County) (AUID 07020012-842) (Station S004-617)

Raven Stream West Branch was initially listed as a wild rice water in MPCA's 2016 Wild Rice Waters database. Attach. A in Appx. 4 to EPA DD, row 2043. The presence of wild rice is confirmed by MPCA online GIS mapping, Exhibit K at 14. MPCA data for Raven Stream West Branch in the Exhibit J folder provides 26 sulfate samples, 100% of which are above 10 mg/L, with average sulfate of 26.73 mg/L. Raven Stream West Branch must be listed as a wild rice WQLS impaired due to sulfate.

Rice Creek (Sherburne) (AUID 07010203-512) (Station S001-523)

MPCA proposed Rice Creek from Rice Lake to Elk River in its 2013 Draft Impaired Waters List (Appx. 4 to EPA's DD). Wild rice is confirmed by MPCA online GIS mapping, Exhibit K at 15.

²⁰ Keetac Final EIS, *supra*, Figure 4.7.4, Exhibit Q.

MPCA data for Rice Creek in the Exhibit J folder provides 15 sulfate samples, 100% of which are above 10 mg/L, with average sulfate of 22.61 mg/L. Rice Creek must be listed as a wild rice WQLS impaired due to sulfate.

Conclusion

WaterLegacy and NMW strongly support the EPA's initial listing of 30 wild rice WQLS impaired due to sulfate and request that EPA list the additional 20 WQLS identified in these comments and listed in summary form in Exhibit A. WaterLegacy and NMW believe that the EPA's oversight of Minnesota's failure to list a single wild rice water impaired due to excessive sulfate is not only reasonable but necessary to fulfill EPA's obligations under the CWA and its implementing regulations.

WaterLegacy and NMW would underscore that the EPA's duty to list impaired waters upon partial disapproval of a state's Section 303(d) list is an independent obligation based on what EPA determines is necessary under the CWA considering all readily available data. On this basis, NMW has conducted rigorous testing and has provided a detailed report on sulfate concentrations in Birch Lake, one of the most sensitive bodies of water affected by existing taconite mining and threatened by potential copper-nickel mining. In these comments, as well as in comments, attachments, and exhibits submitted to EPA in October 2020, March 2021, and April 2021, WaterLegacy has sought to provide not just legal argument, but detailed information from government agencies, academic sources, regulated parties, and members of the public to support the EPA's obligation to list sulfate impaired waters in compliance with the CWA.

Please feel free to contact Matt Norton (matt@savetheboundarywaters.org) if you have any questions about Birch Lake or the NMW Report and to contact Paula Maccabee (paula@waterlegacy.org or pmaccabee@justchangelaw.com) if you have questions about other data or materials. We welcome communications and look forward to the EPA's additional listings of Minnesota wild rice WQLS impaired due to excessive sulfate.

Respectfully submitted,



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